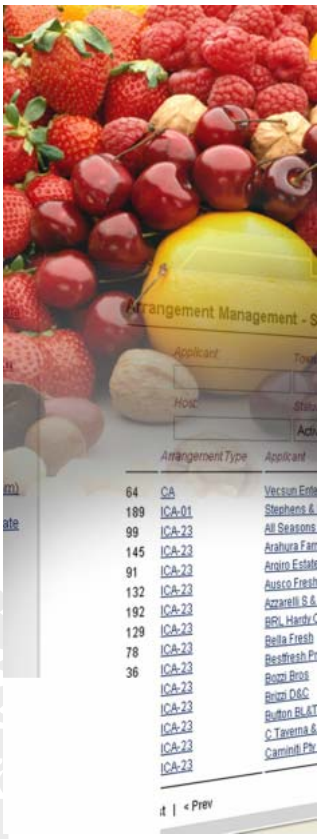
INNOVATIVE GEOSPATIAL SOLUTIONS

PROJECT SHEET

Minerva.doc

Minerva – Plant Health Management System



Client: **Plant Standards, Department of Primary Industries**

A major role of the Plant Standards Branch of the Victorian Department of Primary Industry (DPI) is to minimise the impact of plant pests and diseases on Victorian plant-based industries. These industries contribute over $3,200 million annually to the State's economy.

The Minerva application was developed by Spatial Vision to provide Plant Standards with an integrated state-wide database to manage inter- and intra-state movement of plant materials. Minerva is a Java/J2EE web based application that serves users all over the State by providing a common interface and centralised data source for entry and reporting.

The movement of plant material is controlled through various certification and quality assurance (accreditation) programs offered by Plant Standards to growers, importers and exporters. Minerva will be used by officers to manage these programs, and to maintain comprehensive records of activities.

A key design challenge for the application was to cater for the complex business rules that relate to the treatment of pest host plant material moved within Victoria and interstate whilst maintaining a flexible and generic structure so that Plant Standards could add new permit types and host/ threat/ treatments without the need for underlying coding changes.

Another requirement was for user customisable reporting and letter generation. This was achieved through the use of a third party reporting tool called Windward reports. This tool generates reports or letters in a number of common formats using an RTF template that is also editable by the user.

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Demonstrated Capabilities

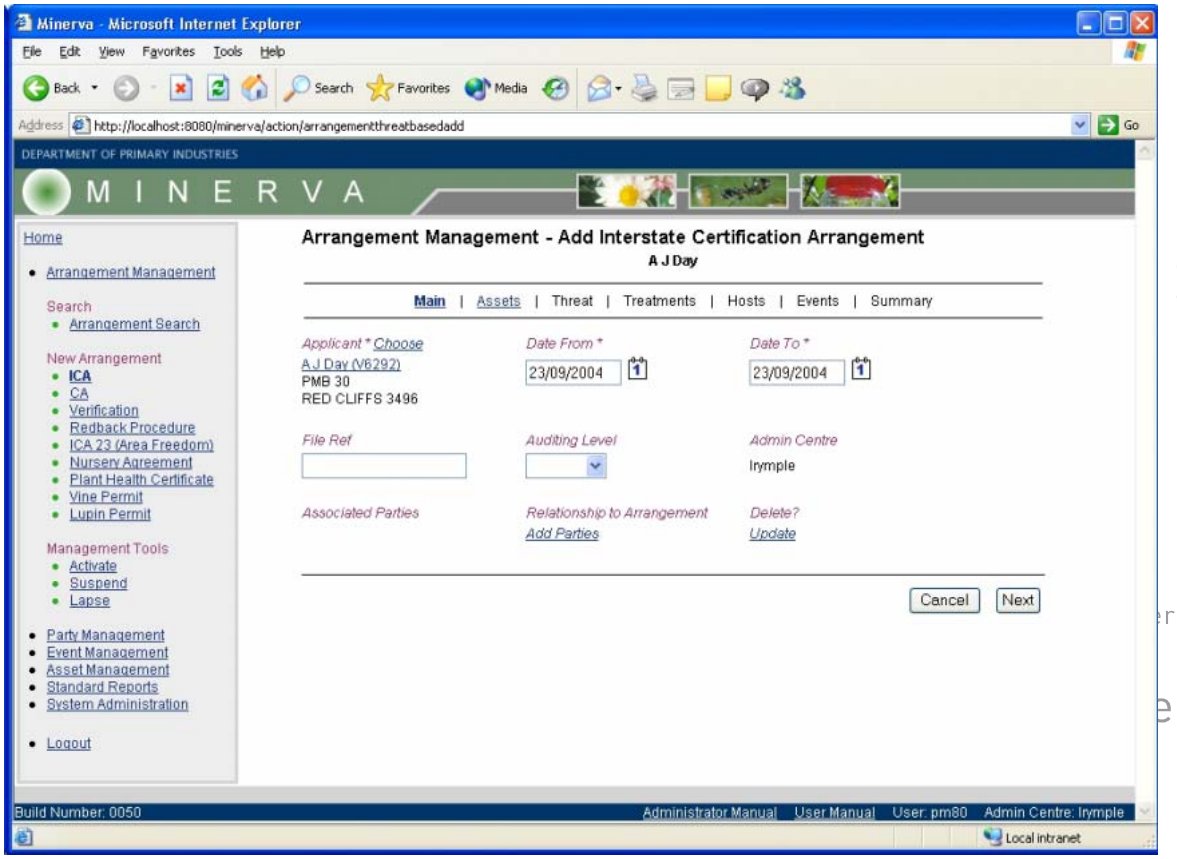
- Data modelling design and implementation
- Java/J2EE application design, development and implementation
- Storage, searching and reporting of the complex data structure required for the Minerva application.
- Construction of generic and flexible application components.
- User customizable reporting and letter generation
- Assistance with deployment to commercial hosting environment
- Provision of production environment Oracle DBA support

Resources

John Heskins and Scott Manley undertook the analysis and design of the application including development of the object model and database. Scott Manley and David Kennedy developed the Java/J2EE components using modern Java development and design techniques.

Technologies Applied

- Poseidon UML (UML object modelling software)
- Oracle Database
- Java/J2EE
  - Java Server Pages
  - Struts application framework
  - Java Standard Tag Library
- Tomcat Java application server



Creation of an agreement for interstate movement of plant material